The control of power split system for optimal fuel consumtion in fuel cell hybrid electric vehicle using dynamic programming

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Fuel cell hybrid electric vehicle(FCHEV) is equipped with two power sources. One of them is fuel cell generating electric energy and the other one is battery storing electric energy. For optimal fuel consumtion, control of FCHEV power split system is required. In this study, the optimization problem is formulated with constraints respect to characteristic of fuel cell and battery and mathmatical model of fuel cell and battery. This problem is solved by dynamic programming. The result of the DP present that efficiency of the fuel is increased by evaluated control.